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ABSTRACT

The number of family programs in low-income communities that promote computer and Internet literacy is steadily growing. This digest describes urban after school and community programs found to be effective among low-income youth and their families. Some are projects of national initiatives that welcome new local affiliates, and others are independent local programs whose creativity might spark the development of equally innovative programs elsewhere. The digest presents general guidelines for creating and implementing after-school and community technology programs. These guidelines are in the areas of first steps (identifying what the programs will be able to accomplish given their resources and potential constituency); partnership building with businesses and national organizations; program evaluation; program organization and management; curriculum (grounded in project-based learning); and resource development and sharing. (Contains 9 references.) (SM)

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# AFTER-SCHOOL AND COMMUNITY TECHNOLOGY EDUCATION PROGRAMS FOR LOW-INCOME FAMILIES

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**Wendy Schwartz**

**ERIC Clearinghouse on Urban Education**

**Institute for Urban and Minority Education**
**Teachers College, Columbia University**

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# AFTER-SCHOOL AND COMMUNITY TECHNOLOGY EDUCATION PROGRAMS FOR LOW-INCOME FAMILIES

The number of family programs in low-income communities that promote computer and internet literacy is steadily growing. They provide easy access to computer technology and instruction, courses for adults in parenting and job skills, educational and recreational after-school activities for children, and family learning activities. Many of the programs are characterized by partnerships among government agencies, corporations, and non-profit organizations that together are able to provide a wealth of resources (North Central Regional Educational Laboratory, NCREL, 2001; OMB Watch, 2000; Wilhelm, Carmen, & Reynolds, 2002).

Because many of the programs have not been operating very long, the process for evaluating the overall effectiveness of family technology programs is still in the early stages. To date, there have been small-scale but rigorous evaluations of some programs, and less formal studies based on interviews and observations have been conducted on others. Findings indicate that a high percentage of the programs are having at least some positive effects on participants' learning and community engagement, and guidelines for implementing effective after-school programs are emerging (Penuel & Kim, 2000).

This digest provides a review of these recommendations, but first presents brief descriptions of urban programs found to be effective for low-income youth and their families. Some are projects of national initiatives that welcome new local affiliates, while others are independent local programs whose creativity might spark the development of equally innovative programs elsewhere.

## Support for Technology Programs

After-school and community programs linked to a national organization usually provide high quality resources and training and often serve both adults and children. They use computers both to promote the technological competence of adults and children and to facilitate learning in the content areas. Programs also often involve the whole family in learning projects that use technology. For example, the National Urban League (NUL), with support from BellAtlantic, coordinates programs in many cities aimed at helping youth develop a wide range of skills and adults become economically self sufficient. NUL provides programs with training and equipment, and sometimes partners with the U.S. Department of Housing and Urban Development (HUD) to deliver services in housing developments (OMB Watch, 2000 for information about HUD programs, see *http://www.hud.gov/offices/hsg/mfh/nnw/aboutnrr/nnwchildren.cfm)*.

The federal government supports technology programs in several ways. The No Child Left Behind Act provides funds for 21st Century Learning Centers to help close the achievement gap (*Frequently Asked Questions*, 2002), and the Technology Opportunities Program (TOP) of the U.S. Department of Commerce offers matching grants for digital network technologies that promote lifelong learning to underserved communities (Wilhelm et al., 2002; for a description of TOP, see *http://www.cfda.gov/public/*). Foundations also provide substantial support. For example, the Benton Foundation operates the Digital Divide Network in addition to making project grants (see *http://www.benton.org/*). The Bill and Melinda Gates Foundation provides both funds and equipment (see *http://www.gatesfoundation.org/*). The non-profit Education Development Center (EDC), which has different partners for different projects, serves as a clearinghouse for the Community Technology Centers' Network (CTCNet, see *http://www.ctcnet.org/*), facilitating communication and information sharing among members and helping save them money through centralized purchasing (NCREL, 2001; Penuel & Kim, 2000).

## After-School Programs

SRI International conducted an evaluation of a large sample of Northern California Community Technology Centers (CTC), using site visits and interviews with key staff and participants to determine how learning is organized, the extent of professional development, and the nature of community outreach and partnerships (Penuel & Kim, 2000). Its largely positive findings indicate that after-school programs use many types of strategies. Some programs provide directed instruction; they employ one-on-one tutoring (sometimes using parents as tutors) to teach basic skills or to provide homework assistance, or use an educational software program for drill-and-practice. Others devise multimedia activities that encourage students to explore various computer uses without directions from teachers. For "My Journey to Teen TechArts," for example, students use software to create storyboards that trace their arrival at the program and their participation in it. For another project, "Hear Youth," students research and write position papers on a weekly theme and post them on a teen-managed site on America Online. Many of the projects also encourage students to learn and even design software tools (for a description of these and other CTC programs, see *Promising Practices* at *http://www.sri.com/*).

EDC's YouthLearn Initiative provides a web site and an electronic newsletter in addition to an after-school program and training for youth development professionals. Its Center for Children & Technology works with the staff of The After School Corporation to develop technology programs in New York State, with the ultimate goal of national expansion (see *http://www2.edc.org/CCT/*). EDC has also been an evaluator of Project Connect, a Boys & Girls Club of America pilot effort to integrate technology into its member clubs; EDC's initial positive findings will likely lead to an expansion to additional sites (Henriquez & Ba, 2000).

## Community Programs

There are more than 2,000 Community Technology Centers (CTCs) and related projects serving low-income and minority people around the country. They include libraries, youth organizations, settlement houses, housing development centers, and stand-alone computing centers. Many facilities belong to alliances like CTCNet (described above), which provide valuable services to members. An OMB Watch report (2000) identified some innovative CTC projects that have been shown to benefit participants. A few highlights from OMB Watch's review are presented below (for more information about these projects and descriptions of similar projects, see *http://www.ombwatch.org/article/articleview/319/1/78/*).

The Eastmont Computing Center, a collaboration of local

urban and faith-based organizations in Oakland, provides employment training to 30,000 youths and adults at a mall storefront. It also offers computer-based services, including school-to-career transition, to students at two high schools. The Widening Our World Outreach Program, a partnership of the US West Foundation and the University of Northern Colorado, deploys state-of-the-art "mobile school" vans to six states that offer youths and adults hands-on classes in using the internet. The services of Greenbelt (Maryland) Internet Access Cooperative, run by community volunteers, include support for home use of computers, such as a reduced-rate internet connection and free software, and a web site that contains a calendar of local events. The YWCA Boston provides a computer lab for its Grandfamilies Apartments — housing for grandparents raising their grandchildren — and offers math and science enrichment for children and computer training for adults. La Plaza Telecommunity, an electronic network in northern New Mexico, provides training in the use of technology and access to technology resources to a population of Hispanics, Native Americans, and Anglos, in an effort to promote intercultural dialogue and community revitalization (OMB Watch, 2000).

## Recommendations for Effective Programs

Some general guidelines for creating and implementing after-school and community technology programs have emerged from the research to date. The key recommendations are presented below.

***First Steps.*** It is necessary for program developers to identify what their programs will be able to accomplish, given their resources and potential constituency. Programs should acquire up-to-date hardware and software, and fully train their teachers. To encourage program ownership, community members should be included in planning, and consideration should be given to hiring participants (*Bringing Education*, 1999; Penuel & Kim, 2000).

***Partnership Building.*** Establishing partnerships with businesses and national organizations is also a worthwhile undertaking. Relationships with local businesses can lead to employment for program participants, and partners of all types are likely to contribute material support (*Bringing Education*, 1999; Penuel & Kim, 2000).

***Program Evaluation.*** It is important to plan for evaluating a program frequently and regularly to ensure that it is serving the immediate needs of participants and meeting overall goals (see Peter, 2002 for a guide to these program development processes).

***Program Organization and Management.*** Programs need to be flexible to respond to the different needs of participants. Some participants may want to improve their academic performance, and possibly earn a diploma. Others, though still wanting an employment-oriented curriculum, may prefer an environment that does not remind them of past negative school experiences. The retention of still other participants may depend on maintaining a balance between a recreational and educational focus. To accommodate such disparate demands on a program, developers may have to either offer many types of classes or acknowledge that they cannot successfully serve all potential participants with the resources they have (*Bringing Education*, 1999; Penuel & Kim, 2000).

Because the initial interest of community members may be sparked by the after-school program or parenting classes, it is essential to maintain a family-friendly program. Class times need to be compatible with the schedules of adults, and separate classes for children and adults should be held simultaneously so that child care is not a problem. Providing meals and arranging for transportation may be inducements (*Bringing Education*, 1999; Penuel & Kim, 2000).

Using technology creatively to facilitate administration is also a cornerstone of effective programs. For example, the MOST Initiative, which provides after-school services in Boston, Chicago, and Seattle, uses technology for sharing information among its programs and their participants. MOST also uses technology to communicate with government agencies, the media, and policy-makers (Coltin & McGuire, 1998).

***Curriculum.*** Pedagogy grounded in project-based learning has been shown to be particularly effective, as are projects that involve children and parents working together. Long-term projects leading to the resolution of a real-world problem maintain participants' commitment to the program, and they develop higher-order thinking skills and computer literacy through hands-on practice (*Bringing Education*, 1999; Penuel & Kim, 2000).

***Resource Development and Sharing.*** Finally, policy makers and community leaders need to pool resources by forming more partnerships among government, corporations, and non-profit organizations like those whose success has already been demonstrated. It will take the combined efforts of funders and educators to close both the academic achievement gap and the digital divide (Wilhelm et al., 2002).

**Wendy Schwartz**
**Teachers College, ColumbiaUniversity**

## References

*Bringing education to after-school programs.* (1999, Summer). Washington, DC: U.S. Department of Education, Office of Educational Research and Improvement. (ED 460 096)

Coltin, L., & McGuire, K. (1998, December). ***Making the MOST out of out-of-school time: Technology's role in collaboration.*** Paper in the proceedings of the Families, Technology, and Education Conference, Chicago. (ED 424 996)

***Frequently asked questions: 21st century community learning centers.*** (2002, August). Washington, DC: U.S. Department of Education. Available: http://www.ed.gov/21stcclc/21qa98.html#center

Henriquez, A., & Ba, H. (2000, July). ***Project connect: Bridging the digital divide.*** Newton, MA: Education Development Center.

North Central Regional Educational Laboratory. (2001). ***What do we know: Learning with technology beyond the school bell: Before- and after-school programs and summer school.*** Naperville, IL: Author. Available: http://www.ncrel.org/tech/child/child6.htm

OMB Watch. (2000, May). ***Community technology centers: Collaborations that work.*** Washington, DC: Author. Available: http://ombwatch.org/

Penuel, W.R., & Kim, D. (2000, May). ***Promising practices and organizational challenges in community technology centers.*** Menlo Park, CA: SRI International.

Peter, N. (2002, August). ***Outcomes and research in out-of-school time program and design.*** Philadelphia: Best Practices Institute. Available: http://www.wellesley.edu/WCW/CRW/SAC/publications.html

Wilhelm, T., Carmen, D., & Reynolds, M. (2002, January). ***Connecting kids to technology: Challenges and opportunities.*** Baltimore: The Annie E. Casey Foundation. (ED 467 133)

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ERIC Clearinghouse on Urban Education, Institute for Urban and Minority Education, Box 40, Teachers College, Columbia University, New York, NY 10027, (800) 601-4868. Erwin Flaxman, Director. Wendy Schwartz, Managing Editor.
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